

**From:** [Enders, Jhana](#)  
**To:** [Bojes Heidi](#)  
**Cc:** [Joseph.Haney@tceq.texas.gov](mailto:Joseph.Haney@tceq.texas.gov); [Turner, Philip](#); [Ojeda Jose](#)  
**Subject:** Fwd: Detection Limit - Dräger & VRAE  
**Date:** Tuesday, January 10, 2017 11:37:39 PM

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FYI per meeting request

Jhana Enders  
Federal On Scene Coordinator (FOSC)  
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Sent from my iPad

Begin forwarded message:

**From:** "Ojeda, Jose" <[Jose.Ojeda@WestonSolutions.com](mailto:Jose.Ojeda@WestonSolutions.com)>  
**Date:** January 10, 2017 at 5:58:23 PM CST  
**To:** "Enders, Jhana" <[Enders.Jhana@epa.gov](mailto:Enders.Jhana@epa.gov)>  
**Subject:** Detection Limit - Dräger & VRAE

The detection limit is defined as the minimum concentration of a substance that can be measured and reported. The Dräger tube pump, utilizing a Phosphine specific tube, has a detection limit (minimum concentration that can be measured) of 0.1 ppm for Phosphine. If the concentration of Phosphine is less than 0.1 ppm (< 0.1 ppm), the Dräger tube pump will not detect Phosphine. The measuring range for Phosphine utilizing the Dräger tube pump is 0.1 ppm to 1.0 ppm.

The VRAE has a detection limit (minimum concentration that can be measured) of 0.1 ppm for Phosphine, utilizing a Phosphine specific sensor. If the concentration of Phosphine is less than 0.1 ppm (< 0.1 ppm), the VRAE screen will only display a reading of 0.0 ppm. A 0.0 ppm reading means the concentration of Phosphine is less than the detection limit. The measuring range for Phosphine on the VRAE, utilizing a Phosphine specific sensor, is 0.1 ppm to 20 ppm.



**José L. Ojeda**

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